SB-3335

SYSTEM SELECTOR

SPECIFICATIONS

Input jacks:	PHONO IN-1, -2, -3 TUNER IN-1, -2, -3 AUX IN-1, -2, -3 TAPE IN-1, -2, -3 REC OUT IN-1, -2, -3
Jacks and terminals for amplifiers:	PHONO-1, -2, -3 REC OUT-1, -2, -3 TAPE-1, -2, -3 SPEAKER-1, -2, -3
Terminals for speakers:	SPEAKER-1, -2, -3, -4, -5
	Note: All connectors are provided for both left and right channels.
Dimensions:	400(w) x 149(h) x 320(d) mm $15\frac{3}{4}$(w) x $5\frac{13}{16}$(h) x $12\frac{7}{8}$(d) inches
Net weight:	5.4 kg (12 lb)
Shipping weight:	8.1 kg (17 lb 12 oz)

SONY®

SERVICE MANUAL

B-3335

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SECTION 1
TECHNICAL DESCRIPTION

1-1. CONNECTIONS

AMPLIFIER jacks and terminals

The SB-3335 accepts three amplifiers. Connect as follows:

1. Connect the amplifier phono inputs to the SB-3335 PHONO jacks.
2. Connect the amplifier recording outputs to the REC OUT jacks.
3. Connect the amplifier tape inputs to the TAPE jacks.
4. Connect the amplifier speaker terminals to the SPEAKER terminals.

Note: Since the phono signal must go to an amplifier equalizer section, keep the amplifier input selector in the phono position.
Since all source signals return to the amplifier tape inputs, keep the amplifier monitor selector in the tape position.

INPUT jacks

The SB-3335 accepts three record players, tuners and auxiliary sources. Connect them as follows:

1. Connect the phono cords of a record player to the PHONO jacks and connect the player earth wire to the earth terminal [GROUND].
2. Connect the tuner outputs to the TUNER jacks.
3. Connect the line outputs of an auxiliary source to the AUX jacks.

GROUND terminals

Connect record player earth wires to these terminals.

TAPE RECORDER jacks

The SB-3335 accepts three tape recorders. For playback, connect the tape recorder line outputs to the TAPE jacks. For recording, connect the tape recorder line inputs to the REC OUT jacks.

SPEAKER terminals

The SB-3335 accepts five pairs of speakers. Connect + and – terminals of the SB-3335 to the corresponding + and – terminals of the speakers.

Notes on input connections

Use low-capacitance shielded cables. Especially for phono connection, keep the cables as short as possible.

Be sure the cable connectors are fully inserted in the jacks. A loose connection may cause hum and noise.

When reconnection is required, turn off the amplifiers or lower the volume controls to avoid possible damage on delicate speaker system due to click noise.

1-2. FUNCTION OF SWITCHES AND CONTROLS

1. AMPLIFIER selectors

Select either amplifier connected.

2. MUTING switch

Decreases the speaker sound by 20 dB. This switch is useful when you make telephone conversation or when you lower the phono cartridge onto the disc.

3. MASTER VOLUME control

Before setting up the system, adjust each amplifier volume to the same level. Then you can control all amplifier levels with this knob. The adjustment range of this knob is determined by the level setting of the amplifier connected.

Note: Do not set the amplifier volume to maximum. If you set the volume too high, speaker damage may result when you accidentally set the amplifier monitor switch to the source position.

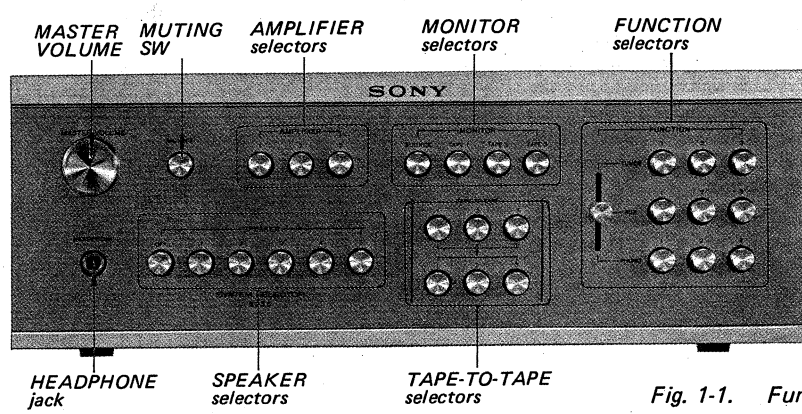


Fig. 1-1. Function and controls

4. HEADPHONE jack

Accepts most* low- and high-impedance headphones equipped with a standard binaural phone plug.

* Some electrostatic headphones are designed to be driven by the speaker output and cannot be plugged directly into this jack.

5. SPEAKER selectors

To use two pairs of speakers, simultaneously push the button 1 and another desired button. When you push multiple buttons except for the button 1, the smallest number button will be activated; eg., with buttons 2, 3 and 4 pushed-in, the number 2 speakers will be on.

6. MONITOR selectors

Select the program supplied to the amplifier.

To reproduce the source program (TUNER, AUX or PHONO) push the SOURCE button.

To reproduce the tape program connected to the TAPE RECORDER inputs, push either the TAPE 1, 2 or 3 button.

When you push the SOURCE and TAPE button simultaneously, the source program will be reproduced.

7. FUNCTION selectors

To reproduce tuner, phono or auxiliary source, push the MONITOR SOURCE button, set the FUNCTION lever to the desired program, and select the source with the associated FUNCTION button.

Note: When you push multiple buttons, all the signals are connected and mixed.

8. TAPE-TO-TAPE selectors

Use these buttons for tape duplication. Select a playback tape recorder with the upper button, and a recording tape recorder with the lower button. Tape duplication is made independently of the sound reproduction which is selected by the MONITOR and FUNCTION selectors. Do not push the same number upper and lower buttons.

Note: When the lower button is pushed-in, the pushed-button REC OUT jacks supply the tape playback signals selected by the upper button. When the lower button is released, the REC OUT jacks supply the source signal selected by the FUNCTION selectors.

Keep the amplifiers controls as follows:
Function selector..... phono
Monitor selector ..... tape

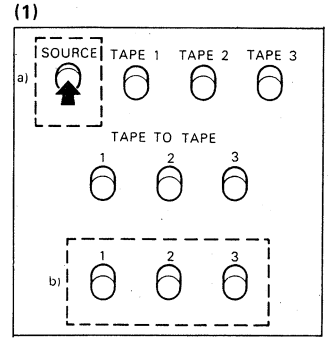
1-3. TYPICAL USE OF MONITOR SELECTORS AND TAPE-TO-TAPE SELECTORS

The source signal selected by the FUNCTION selector is separately routed into MONITOR selector and TAPE-TO-TAPE selector. Also the tape signal (applied to the TAPE inputs) is divided into the MONITOR and TAPE-TO-TAPE selectors. Therefore, by using these selector buttons, you will make three operations (reproduction, recording, and tape duplication) simultaneously or independently, as you desire. Remember that the MONITOR selectors and the TAPE-TO-TAPE selectors work separately.

Typical uses of these selectors are as follows (refer to the illustrations).

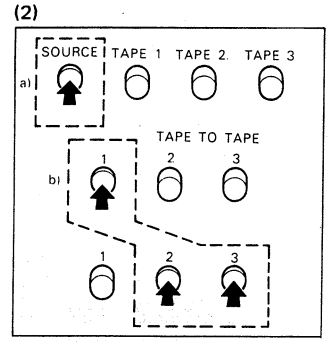
1. a) Source reproduction
   b) Source recording on tape recorders 1, 2 and 3
   Tape recorders 1, 2, 3 ..... Recording

(1)



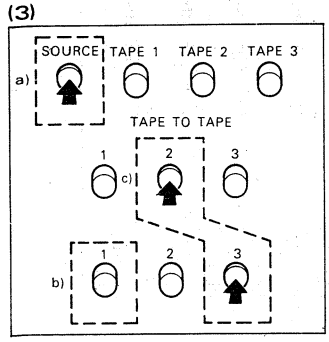
2. a) Source reproduction
   b) Duplication of tape 1 on recorders 2 and 3
   Tape recorder 1 ..... Playback
   Tape recorder 2 ..... Recording
   Tape recorder 3 ..... Recording

(2)



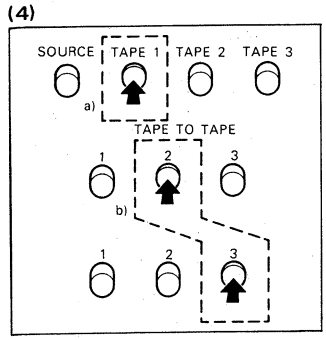
3. a) Source reproduction
   b) Source recording on recorder 1
   c) Duplication of tape 2 on recorder 3
   Tape recorder 1 ..... Recording
   Tape recorder 2 ..... Playback
   Tape recorder 3 ..... Recording

(3)



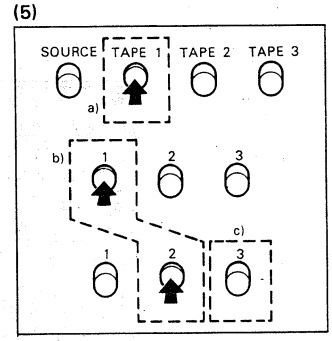
4. a) Tape 1 playback
   b) Duplication of tape 2 on recorder 3
   Tape recorder 1 ..... Playback
   Tape recorder 2 ..... Playback
   Tape recorder 3 ..... Recording

(4)



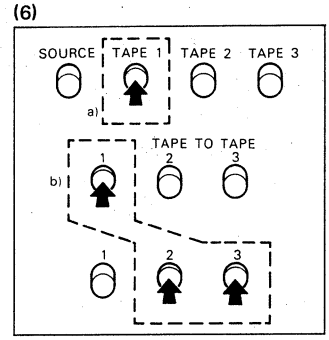
5. a) Tape 1 playback
   b) Duplication of tape 1 on recorder 2
   c) Source recording on recorder 3
   Tape recorder 1 ..... Playback
   Tape recorder 2 ..... Recording
   Tape recorder 3 ..... Recording

(5)

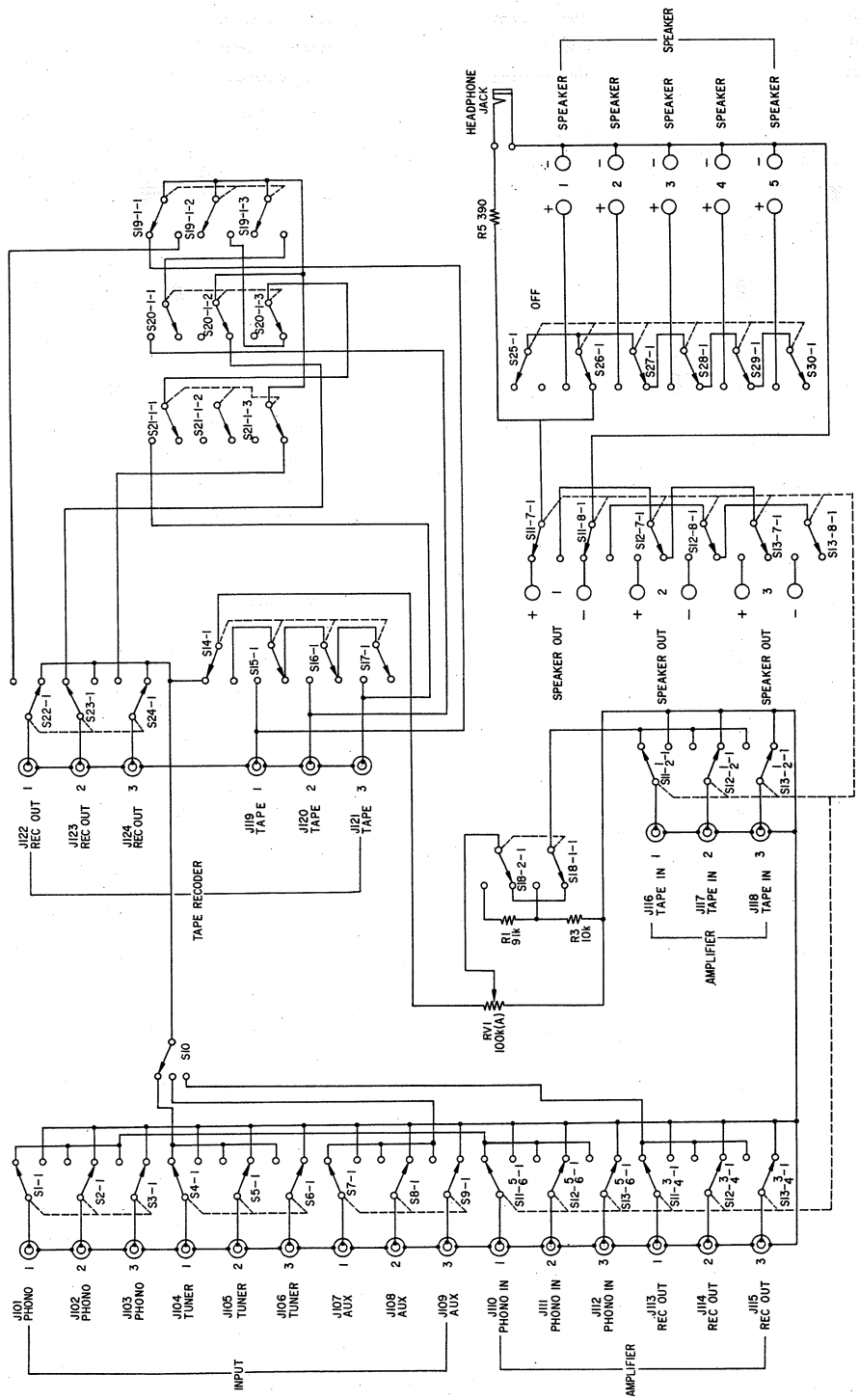


6. a) Tape 1 playback
   b) Duplication of tape 1 on recorders 2 and 3
   Tape recorder 1 ..... Playback
   Tape recorder 2 ..... Recording
   Tape recorder 3 ..... Recording

(6)



1-4. BLOCK DIAGRAM



SECTION 2
DISASSEMBLY AND REPLACEMENT

Note: All screws in this service manual are Phillips type (cross recess type) unless otherwise indicated.
(–) : slotted head.

2-1. FRONT PANEL REMOVAL

1. Remove the top cover, then pull off the MASTER VOLUME and FUNCTION knobs.
2. Remove the screws shown in Fig. 2-1 and 2-2. This frees the front panel.

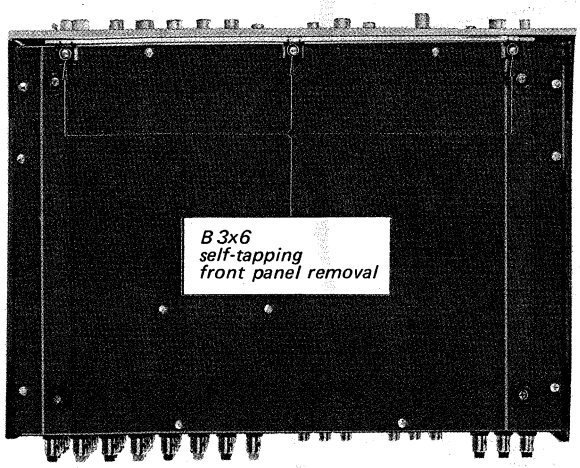


Fig. 2-1. Bottom view

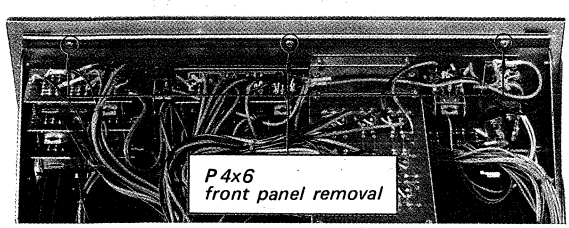


Fig. 2-2. Front panel removal

2-2. PUSHBUTTON SWITCH REPLACEMENT

1. Remove the front panel as described in Procedure 2-1.
2. Remove the screws securing each defective switch to the front subchassis.
   Take the switch along with the circuit board.

   Note: To remove AMPLIFIER switch, take out the four screws securing the circuit board bracket to the chassis as shown in Fig. 2-3.
3. Unsolder and clean the each lug of the switch with the soldering iron having solder sucking tip. This frees the defective switch.

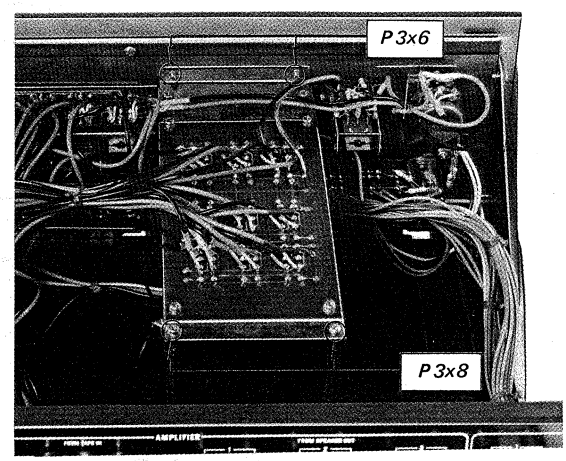


Fig. 2-3. Switch bracket removal

2-3. SPEAKER BINDING POST REMOVAL

1. Remove the top cover.
2. Remove the screw securing the binding post from the back.

SECTION 3
REPACKING

The SB-3335's original shipping carton and repacking materials are the ideal containers for shipping the unit. However to secure the maximum protection, the SB-3335 must be repacked in these materials precisely as before. The proper repacking procedures are shown in Fig. 3-1.

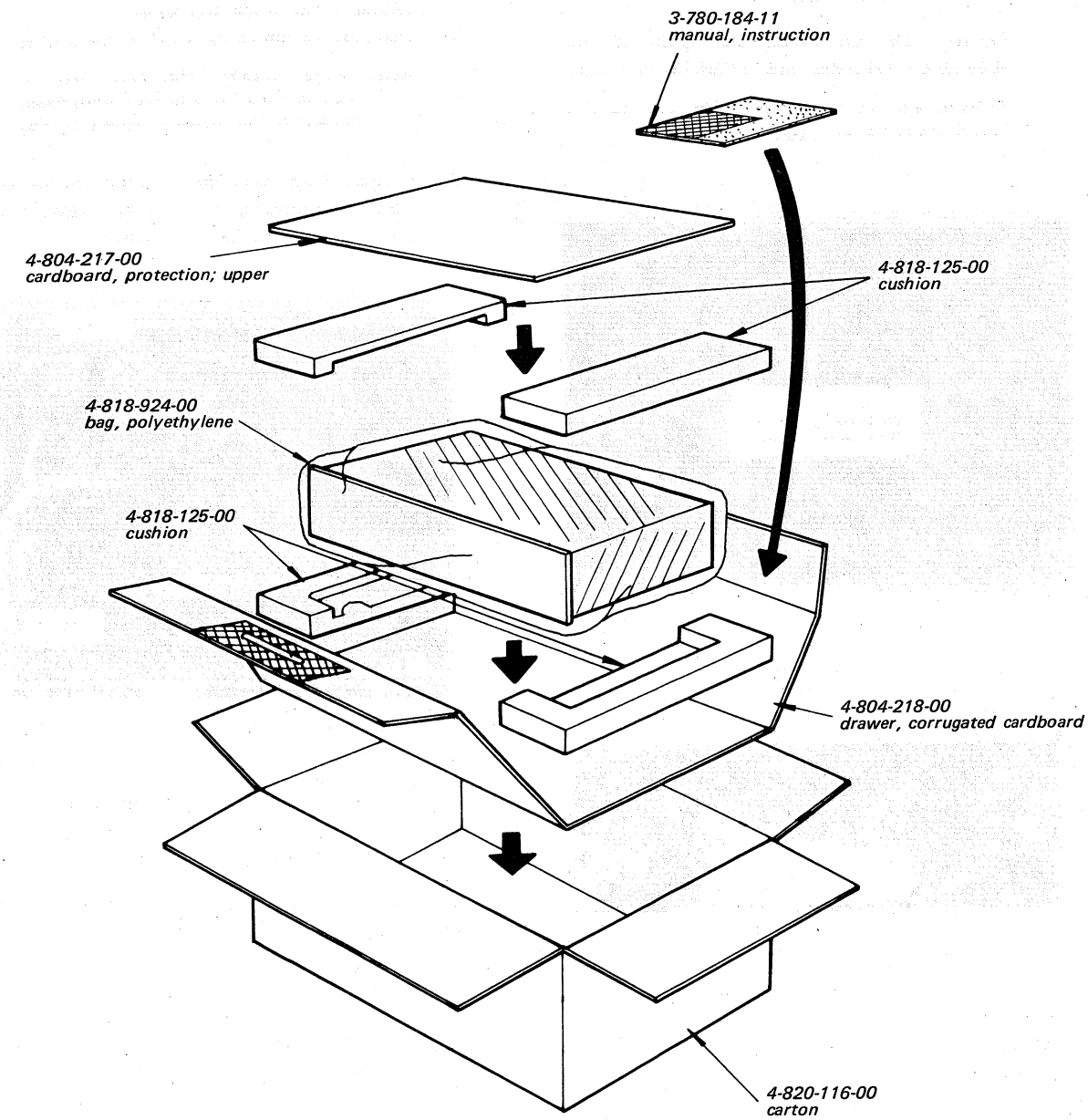
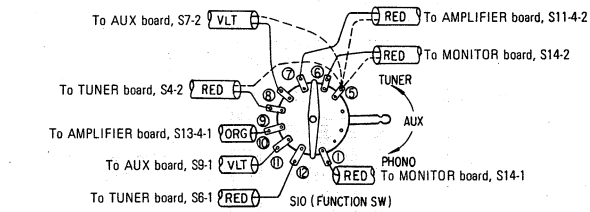
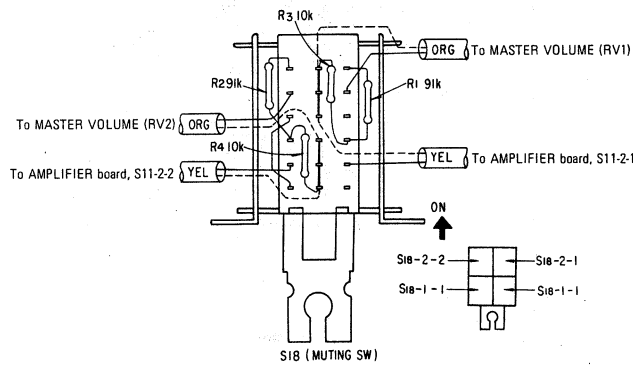


Fig. 3-1. Repacking

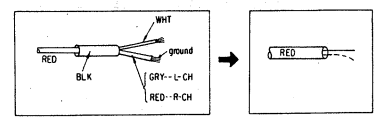
SECTION 4
DIAGRAMS

4-1. WIRING DIAGRAM – FUNCTION Switch and MUTING Switch –

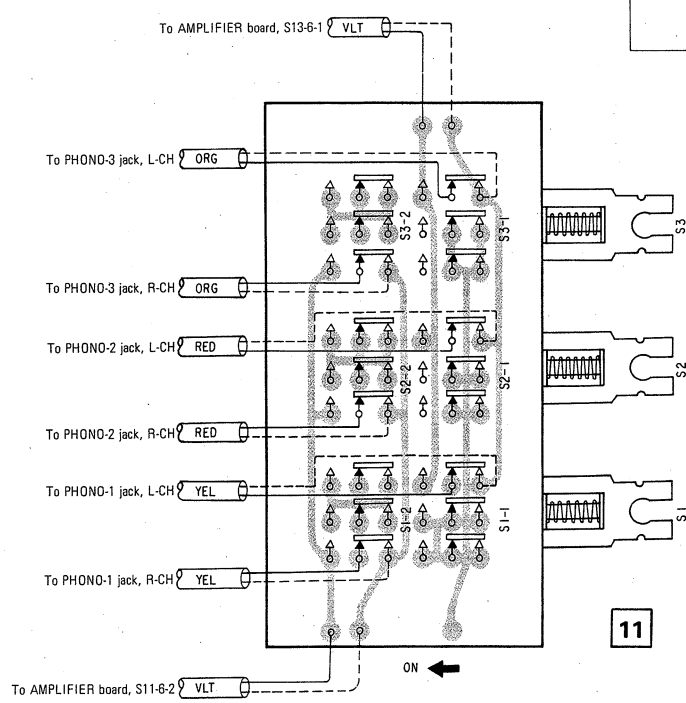




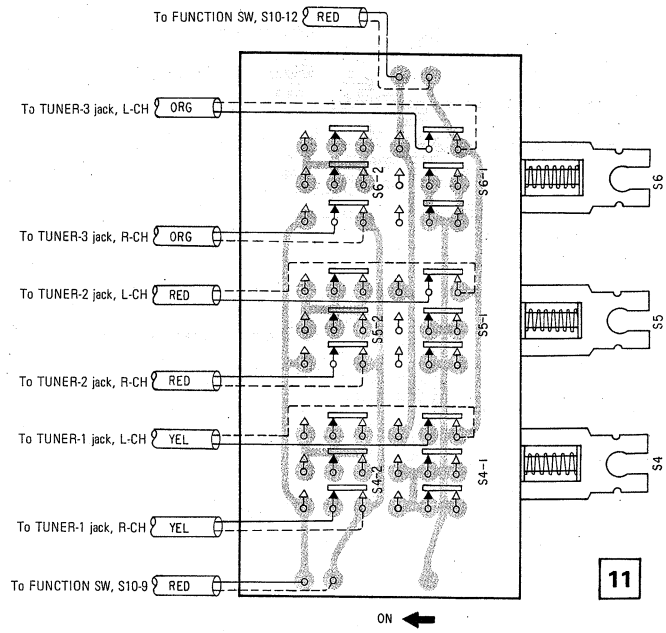
Note: Since all shielded cables are finished with tubing as shown, only the color of jacket are indicated.



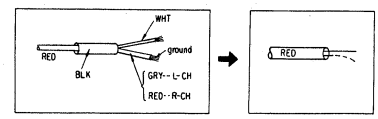
4-2. MOUNTING DIAGRAM – PHONO Board –



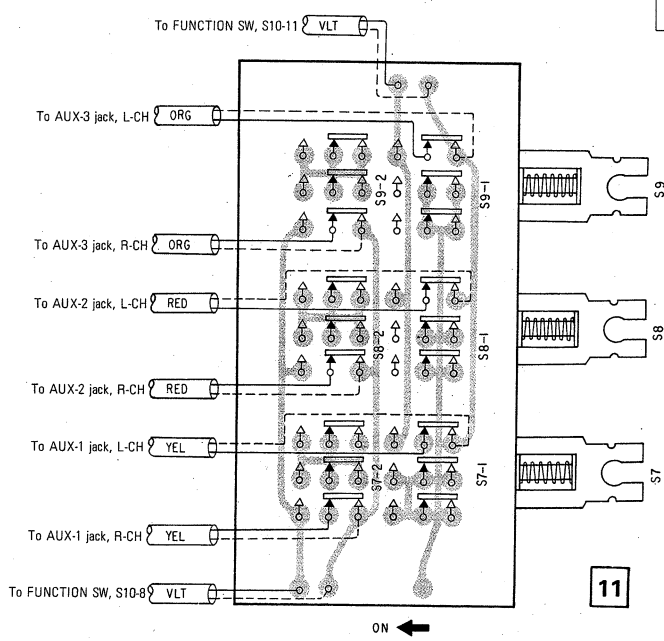
4-3. MOUNTING DIAGRAM – TUNER Board –



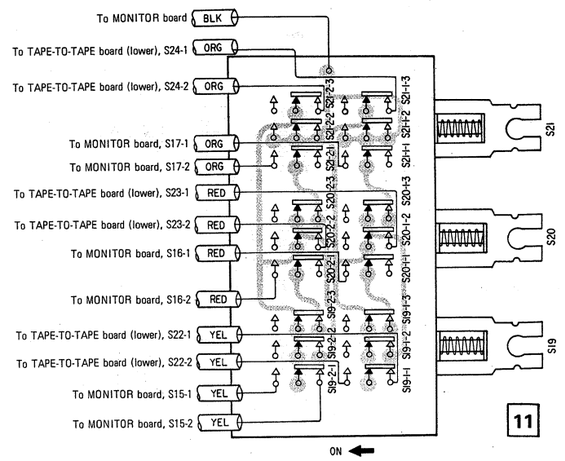
Note: Since all shielded cables are finished with tubing as shown, only the color of jacket are indicated.



4-4. MOUNTING DIAGRAM – AUX Board –

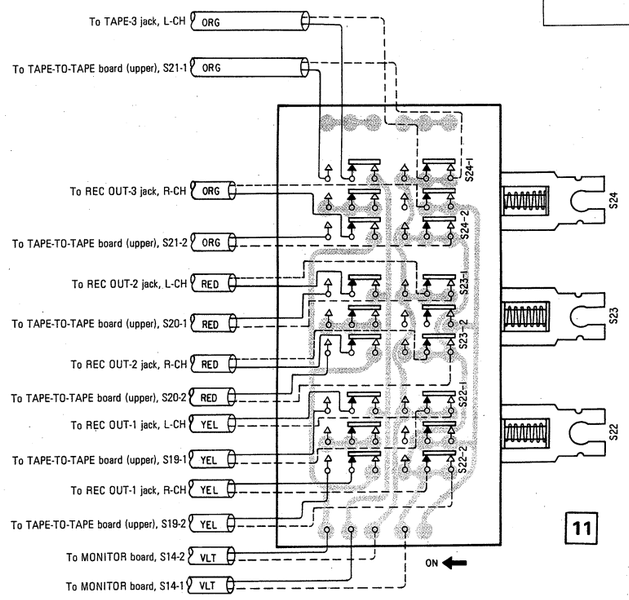


4-5. TAPE-TO-TAPE Board (Upper)

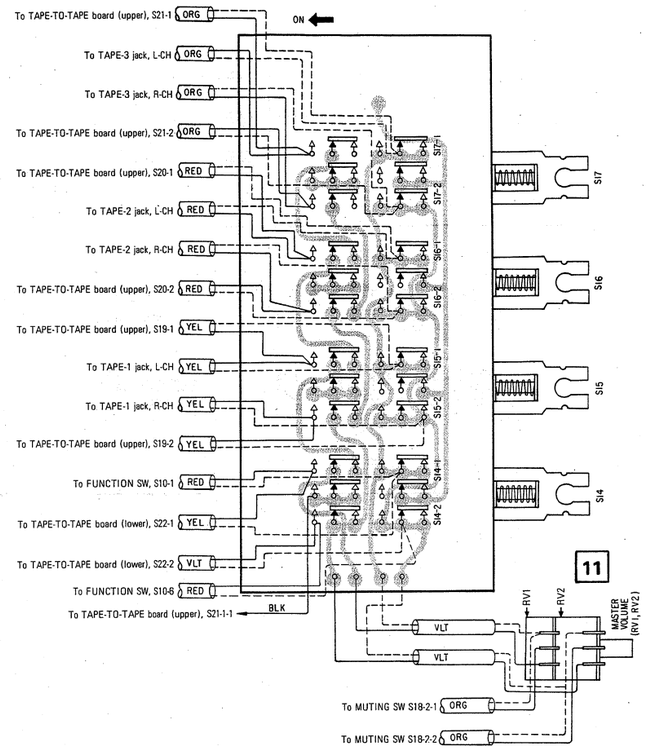

To MONITOR board BLK
To TAPE-TO-TAPE board (lower), S24-1 ORG
To TAPE-TO-TAPE board (lower), S24-2 ORG
To MONITOR board, S17-1 ORG
To MONITOR board, S17-2 ORG
To TAPE-TO-TAPE board (lower), S23-1 RED
To TAPE-TO-TAPE board (lower), S23-2 RED
To MONITOR board, S16-1 RED
To MONITOR board, S16-2 RED
To TAPE-TO-TAPE board (lower), S22-1 YEL
To TAPE-TO-TAPE board (lower), S22-2 YEL
To MONITOR board, S15-1 YEL
To MONITOR board, S15-2 YEL
S21
S20
S19
11
ON

Note: Since all shielded cables are finished with tubing as shown, only the color of jacket are indicated.

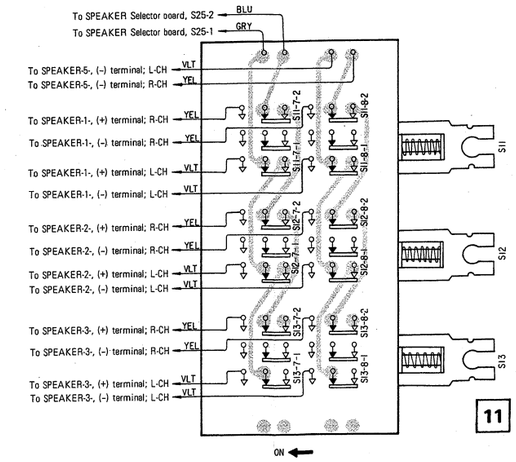
4-6. TAPE-TO-TAPE Board (Lower)


To TAPE-3 jack, L-CH ORG
To TAPE-TO-TAPE board (upper), S21-1 ORG
To REC OUT-3 jack, R-CH ORG
To TAPE-TO-TAPE board (upper), S21-2 ORG
To REC OUT-2 jack, L-CH RED
To TAPE-TO-TAPE board (upper), S20-1 RED
To REC OUT-2 jack, R-CH RED
To TAPE-TO-TAPE board (upper), S20-2 RED
To REC OUT-1 jack, L-CH YEL
To TAPE-TO-TAPE board (upper), S19-1 YEL
To REC OUT-1 jack, R-CH YEL
To TAPE-TO-TAPE board (upper), S19-2 YEL
To MONITOR board, S14-2 VLT
To MONITOR board, S14-1 VLT
S24
S25
S22
11
ON

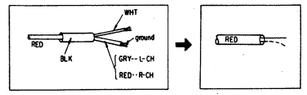
4-7. MONITOR Board



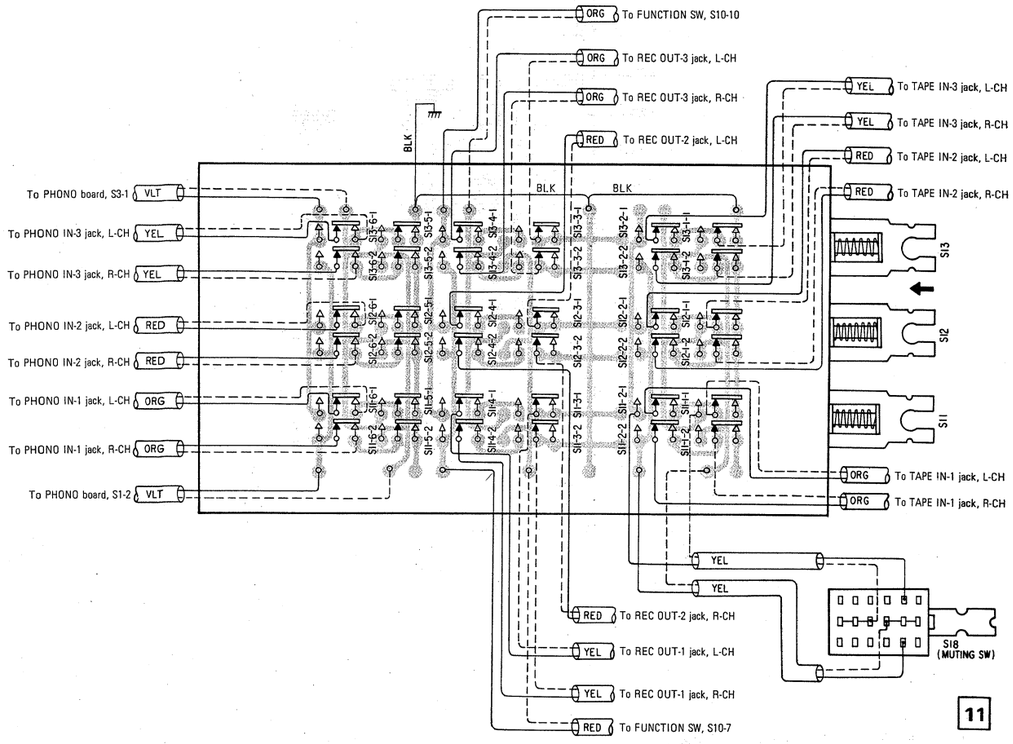
4-8. SPEAKER OUT Selector Board


To SPEAKER Selector board, S25-2 BLU
To SPEAKER Selector board, S25-1 GRY
To SPEAKER-5-, (-) terminal; L-CH VLT
To SPEAKER-5-, (-) terminal; R-CH YEL
To SPEAKER-1-, (+) terminal; R-CH YEL
To SPEAKER-1-, (-) terminal; R-CH YEL
To SPEAKER-1-, (+) terminal; L-CH VLT
To SPEAKER-1-, (-) terminal; L-CH VLT
To SPEAKER-2-, (+) terminal; R-CH YEL
To SPEAKER-2-, (-) terminal; R-CH YEL
To SPEAKER-2-, (+) terminal; L-CH VLT
To SPEAKER-2-, (-) terminal; L-CH VLT
To SPEAKER-3-, (+) terminal; R-CH YEL
To SPEAKER-3-, (-) terminal; R-CH YEL
To SPEAKER-3-, (+) terminal; L-CH VLT
To SPEAKER-3-, (-) terminal; L-CH VLT
S11
S12
S13
11
ON

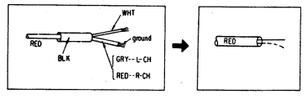
Note: Since all shielded cables are finished with tubing as shown, only the color of jacket are indicated.



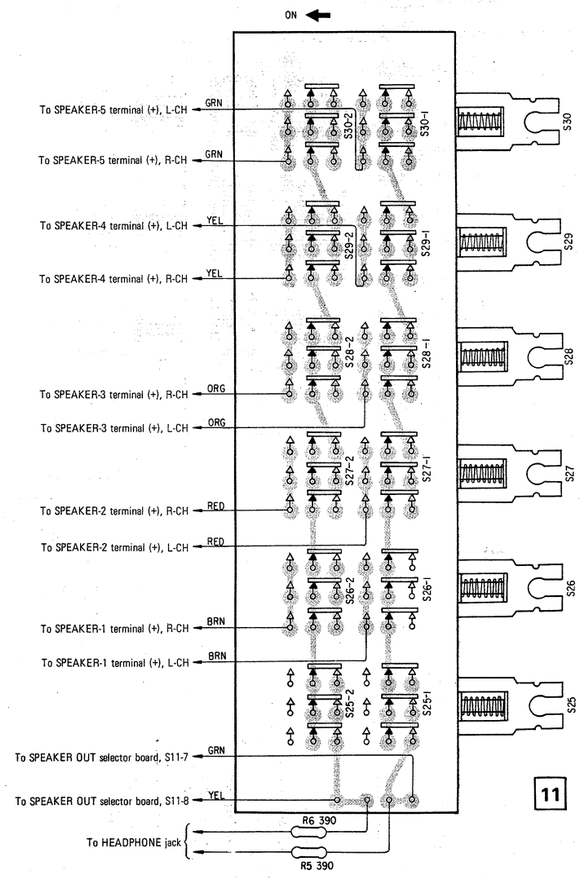
4-9. AMPLIFIER Board



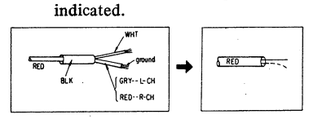
Note: Since all shielded cables are finished with tubing as shown, only the color of jacket are indicated.



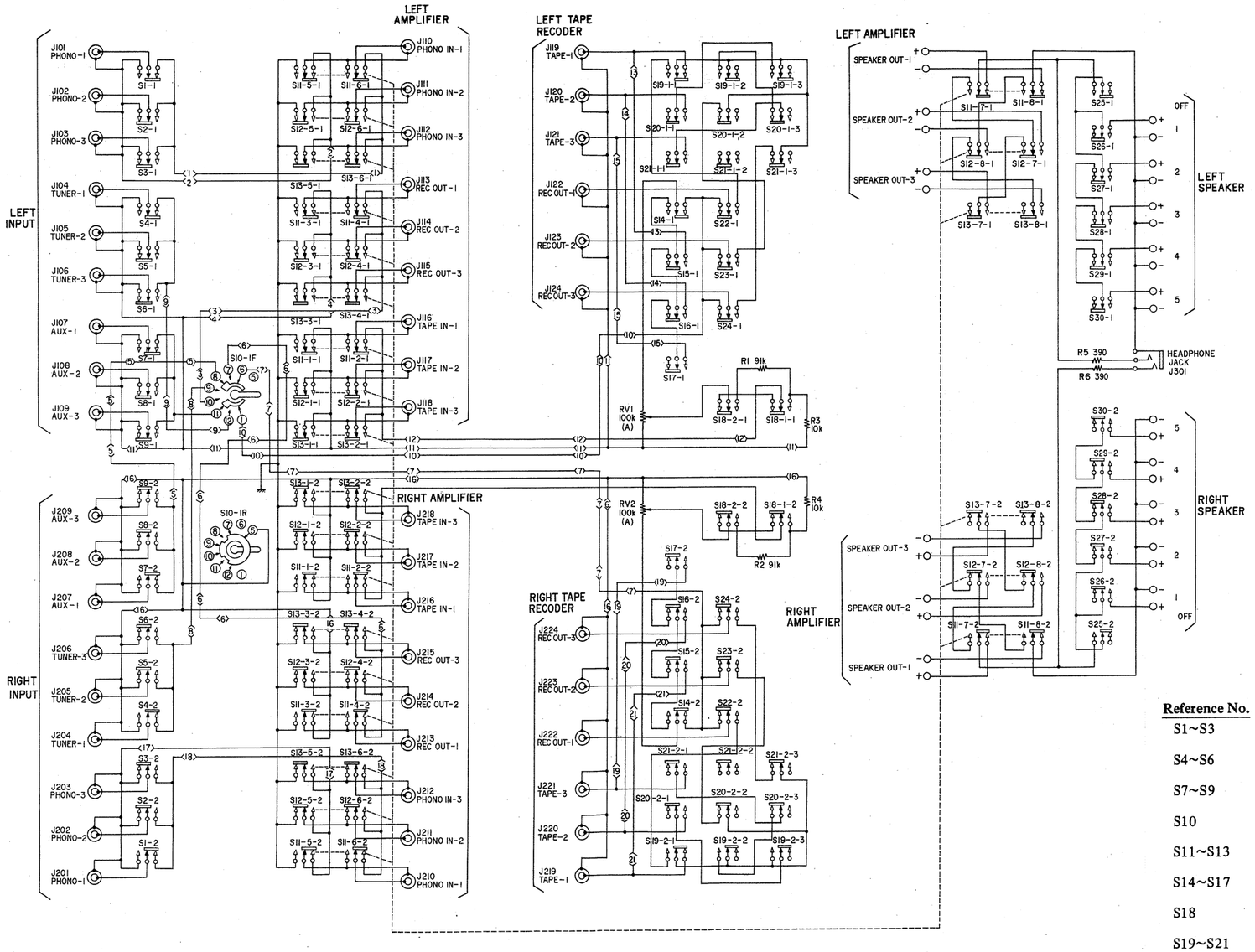
4-10. SPEAKER Selector Board



Note: Since all shielded cables are finished with tubing as shown, only the color of jacket are indicated.



4-11. SCHEMATIC DIAGRAM

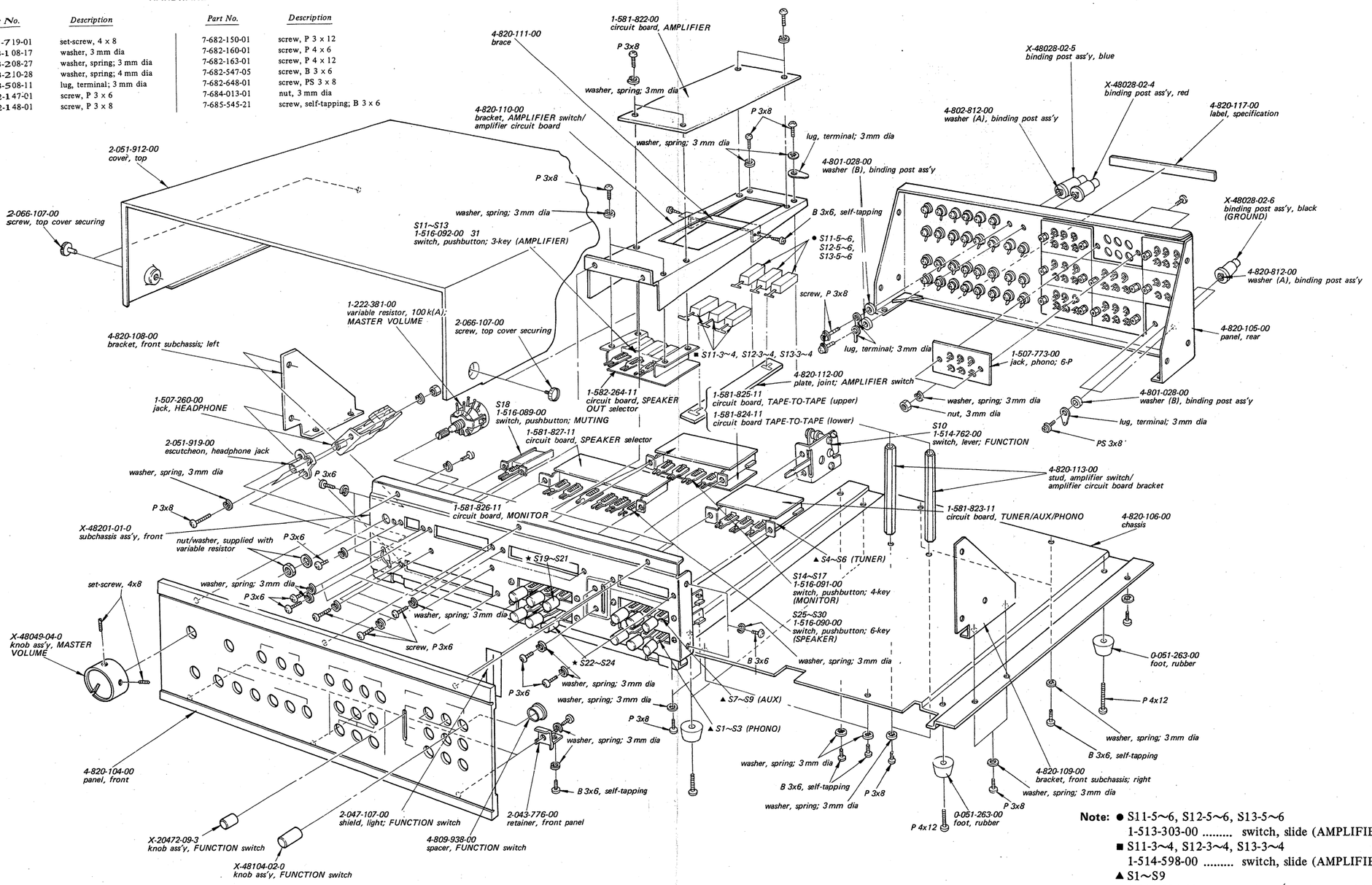


Reference No.	Description	Position
S1~S3	PHONO SW (PHONO-1, -2, -3)	PHONO-1
S4~S6	TUNER SW (TUNER-1, -2, 3)	TUNER-1
S7~S9	AUX SW (AUX-1, -2, -3)	AUX-1
S10	FUNCTION SW (TUNER-AUX-PHONO)	TUNER
S11~S13	AMPLIFIER SW (AMPLIFIER-1, -2, -3)	AMPLIFIER-1
S14~S17	MONITOR SW (SOURCE, TAPE-1, -2, -3)	SOURCE
S18	MUTING SW (OFF-ON)	OFF
S19~S21	TAPE-TO-TAPE SW (TAPE-TO-TAPE-1, -2, 3)	TAPE-TO-TAPE (1)
S22~S24	TAPE-TO-TAPE SW (TAPE-TO-TAPE-1, -2, 3)	TAPE-TO-TAPE (2)
S25~S30	SPEAKER SW (OFF, 1, 2, 3, 4, 5)	OFF

SECTION 5
EXPLODED VIEW

HARDWARE

Part No.	Description	Part No.	Description
7-621-719-01	set-screw, 4 x 8	7-682-150-01	screw, P 3 x 12
7-623-108-17	washer, 3 mm dia	7-682-160-01	screw, P 4 x 6
7-623-208-27	washer, spring; 3 mm dia	7-682-163-01	screw, P 4 x 12
7-623-210-28	washer, spring; 4 mm dia	7-682-547-05	screw, B 3 x 6
7-623-508-11	lug, terminal; 3 mm dia	7-682-648-01	screw, PS 3 x 8
7-682-147-01	screw, P 3 x 6	7-684-013-01	nut, 3 mm dia
7-682-148-01	screw, P 3 x 8	7-685-545-21	screw, self-tapping; B 3 x 6



Note: ● S11-5~6, S12-5~6, S13-5~6
1-513-303-00 ..... switch, slide (AMPLIFIER)
■ S11-3~4, S12-3~4, S13-3~4
1-514-598-00 ..... switch, slide (AMPLIFIER)
▲ S1~S9
1-516-094-00 ..... switch, pushbutton; 3-key (FUNCTION)
★ S19~S21, S22~S24
1-516-094-00 ..... switch, pushbutton; 3-key (TAPE-TO-TAPE)
1-516-093-00 ..... switch, pushbutton; 3-key (TAPE-TO-TAPE)

SECTION 6
ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
	CIRCUIT BOARDS	
	1-581-822-11	AMPLIFIER
	1-581-823-11	TUNER/AUX/PHONO
	1-581-824-11	TAPE-TO-TAPE (lower)
	1-581-825-11	TAPE-TO-TAPE (upper)
	1-581-826-11	MONITOR
	1-581-827-11	SPEAKER selector
	1-582-264-11	SPEAKER OUT selector
	RESISTORS	
	All resistance values are in ohms, ±5%, ¼W and carbon type unless otherwise indicated.	
R1	1-244-697-11	10k
R2	1-244-720-11	91k
R3	1-244-697-11	10k
R4	1-244-720-11	91k
R5	1-244-663-11	390
R6	1-244-663-11	390
RV1/RV2	1-222-381-00	100k(A)/100k(A), variable
	SWITCHES	
S1~S3	1-516-094-00	switch, pushbutton; 3-key (FUNCTION, PHONO)
S4~S6	1-516-094-00	switch, pushbutton; 3-key (FUNCTION, TUNER)
S7~S9	1-516-094-00	switch, pushbutton; 3-key (FUNCTION, AUX)
S10	1-514-762-00	switch, lever (FUNCTION)
S11-7~8, S12-7~8, S13-7~8	1-516-092-00	switch, pushbutton (SPEAKER OUT)
S11-3~6, S12-3~6, S13-3~6	1-514-598-00	switch, slide (AMPLIFIER)
S11-1~2, S12-1~2, S13-1~2	1-513-303-00	switch, slide (AMPLIFIER)
S14~S17	1-516-091-00	switch, pushbutton; 4-key (MONITOR)
S18	1-516-089-00	switch, pushbutton (MUTING)
S19~S21	1-516-094-00	switch, pushbutton; 3-key (TAPE-TO-TAPE)
S22~S24	1-516-093-00	switch, pushbutton; 3-key (TAPE-TO-TAPE)
S25~S30	1-516-090-00	switch, pushbutton; 6-key (SPEAKER)
	MISCELLANEOUS	
J1~J24	1-507-773-00	jack, phono; 6-p
J25	1-507-260-00	jack, HEADPHONE